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Analysis Of The Cognitive Content Of Two Types Of Swimming According To Content Organization Indicators And Their Impact On Technical Performance And Achievement

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Abstract

Study purpose. University curricula need continuous review, analysis, change, and development due to their strong association with methodological variables. The analysis of the scientific material for swimming (the textbook) according to the indicators of organizing the educational content for swimming activities should be followed to identify the shortcomings and strengths and then follow up on modern educational directives. The study aims to reveal the degree of inclusion of indicators of organizing the educational content for swimming events. Also, it seeks to select and organize proposed educational content for the freestyle and breaststroke swimming events.

Material and methods. The researchers used two approaches; the first was the descriptive approach, using content analysis to analyze and evaluate the textbook for the swimming subject (freestyle and breaststroke events). The researchers prepared a list of educational content organization indicators for swimming events. The second approach was the experimental approach, as the design of the control and experimental groups was used, and the number of sample

members was (30) female students. The content application took eight weeks, at a rate of one educational unit per week.

Results. The results showed that the experimental group students excelled in achievement and technical performance in freestyle and breaststroke swimming due to the proposed educational content selected according to logical and scientific selection criteria.

Conclusion. The researchers concluded that proposing and implementing educational programs according to strict scientific and international standards is important. This reflects positively on students' teaching and learning activities.

Keywords: Indicators, Content organization, Freestyle, Breaststroke.

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Introduction

The school curriculum is one of the most important components of the education system. This system establishes educational contexts through which learners acquire knowledge, information, skills, and ideas. In order to maintain the sustainability of these curricula, it is necessary for specialists in the field of education to study these curricula in terms of analysis, evaluation, and development. University curricula are one of the most important curricula that need to be reviewed, analyzed, changed, and developed continuously due to their high correlation with methodological variables. This has led to major social, economic, and cultural changes in all areas (Siddiqui, S. A., Ra'ed Abdelkarim, S. J., & Dwivedi, 2023)

The modern curriculum aims to provide learners with knowledge, skills, attitudes, and values and to modify their behavior in a certain way in order to achieve the desired educational objectives. This is related to the existence of multiple outcomes or learning outcomes that the curriculum seeks to achieve. In simple terms, there is a certain perception of what learners should achieve cognitively, skillfully, and emotionally after completing certain stages of study or after passing through certain educational situations (Thangaraju, P., & Medhi, 2023).

The methodological textbook is the primary link between those who plan its content, those who implement it, and those who receive it in the classroom. A methodological textbook is not only a means of learning but also one of the most important tools in the teaching and learning process. In other words, it is an integrated system that deals with the elements of educational content in a detailed manner with the aim of helping teachers and students to achieve the objectives of the curricula. This makes the methodological book a pillar of progress and development in any society and for all disciplines (Perisic, A., Perisic, I., Lazic, M., & Perisic, 2023).

The process of selecting and organizing educational content is considered one of the most important indicators that should be provided in textbooks (Arcaro, 2024; Stevani, M., & Tarigan, 2023). This is essential to ensure the provision of balanced knowledge characterized by the necessary cognitive depth, comprehensiveness, and inclusion of all necessary concepts and facts selected in a sound scientific manner that aligns with modern scientific trends and considers the individual differences of the target audience (Dehalwar, K., & Sharma, 2023; Duta Putra Utama, D., Doewes, M., Fajar Ekawati, F., & Németh, 2023). Additionally, the content should be adjustable and subject to development whenever necessary, contributing to facilitating and enhancing the learning process for the learners (Al-Ajeely, S. A., Alkhawaldeh, M. A., & Khasawneh, 2023). It should effectively contribute to advancing their level of maturity, abilities, skills, and potential. The importance of this research lies in analyzing the educational content of the swimming subject (the methodological textbook) according to the indicators of the organization of the academic content for swimming events. As well as organizing educational content for the activities of freestyle and breaststroke according to the indicators for selecting the educational content.

Through the scientific studies and research conducted in the field of teaching methods and curricula (Matos, J. F., Piedade, J., Freitas, A., Pedro, N., Dorotea, N., Pedro, A., & Galego, 2023; VanTassel-Baska, J., & Wood, 2023), we found that most of the studies focused on the teacher, the learner, and teaching methods. However, studies were scarce regarding interest in educational content, which is no less important than the teacher or the learner.

Hence, the problem of the study came in conducting research concerned with educational content, especially that related to the physical education subject for female students. Also, it focuses on analyzing, criticizing, and modifying it at the level of the textbook as content. Many institutions view the analysis process as a digital monitoring process for the content of the curriculum, which makes it a truncated process, as evaluating and analyzing the textbook curriculum is a diagnostic and therapeutic process that leads to developing the curriculum and improving the level and quality of the textbook through deletion, addition, and modification. In addition to achieving the process of understanding the educational content and improving the teaching process, the process of analyzing the content requires methodological frameworks and practical and objective contexts, as well as tools that are characterized by validity and stability, enabling those interested to discover and determine the nature of the educational content in form and content in preparation for updating and developing it.

If we shed light on the learning outcomes of swimming events in terms of performance art, achievement, and sports knowledge, we will find in this case that these outcomes are almost simple to a large extent, especially among students of the College of Physical Education and Sports Sciences (CPSS). One of the reasons for this is that the educational content of

swimming events does not meet the goals we seek to achieve, which prompts us to ask the following question: To what extent are indicators of organizing educational content available in the educational content of the two swimming events?

Materials and Methods

Study Participants

The researchers adopted female students of the College of Physical Education and Sports Sciences as a research population. Research sample: The research sample consisted of (30) female students from the College of Physical Education and Sports Sciences, divided into two sections (A) and (B), with (15) students in each section. Group (A- control) was taught the educational content followed in teaching the freestyle and breaststroke swimming activities. Group (B- experimental) was taught the content organized by the researchers for the freestyle and breaststroke swimming activities.

Study Organization

The researchers used descriptive and experimental methods in this work. To analyze the content of physical education, the researcher adopted the educational curriculum for swimming, which is represented by the methodological textbooks for swimming (Swimming by Faisal Rashid Al-Ayyash), approved by the central sector of the Ministry of Higher Education and Scientific Research and approved by the College of Physical Education and Sports Sciences at the University of Mosul. The content analysis aimed to determine the extent to which indicators of educational content organization were included in the academic content of swimming events.

Statistical Analysis

The process of analyzing the educational content of the swimming subject went through the following procedures:

1. Type of analysis: The researchers adopted constructive analysis because the analysis adopted is linked to the teaching process, the educational environment, and mental abilities.
2. Units of analysis: Enriching the analysis process with multiple and diverse dimensions highlights different aspects of the educational content. This makes the analysis process more comprehensive, in-depth, accurate, and credible. To achieve this, the researchers adopted the following units (unit of a topic, unit of ideas, unit of area, unit of shapes, pictures, charts, and tables, and unit of recording represented by number, frequency, and percentage).
3. Analysis categories: These are groups of elements subject to a specific theory or classification. They are formulated as indicators used by the person conducting the analysis process as tools for analyzing educational content units. The analysis categories also determine the type of analysis used.

The researchers used the category of content organization standards intending to prepare a list of content organization indicators, which consists of:

Reviewing the literature and previous studies:

The researchers reviewed the literature and previous studies and did not find, to their knowledge, a tool suitable as an indicator for organizing content for swimming events. Therefore, the researchers used a list of content organization indicators to analyze the content of the swimming methodology book.

Objective of the list:

This list aims to analyze the educational content of the freestyle and breaststroke events.

The approved theoretical foundations: Researchers rely on sources that address the elements of organizing educational content. They are (Khalil, M., Prinsloo, P., & Slade 2023; Qarni 2016; Al-Hashemi, A. R., Attia 2014). The researchers found a discrepancy in determining the number of these elements. Therefore, all standards were limited and approved, aiming to obtain a more comprehensive tool for indicators of organizing educational content. Thus obtaining more accurate results. These standards are (comprehensiveness, continuity, sequential, integration, gradation, balance, accumulation, concentration, flexibility and growth).

Procedural definitions of standards for organizing educational content:

Reviewing references and literature, the researchers identified all definitions of standards for organizing educational content. In light of that, procedural definitions for these standards were formulated.

Formulation of indicators for the standards of organizing educational content:

The researchers formulated indicators for each identified standard based on the characteristics and procedural definitions of the standards for organizing educational content, totaling 48 indicators. Then, the researchers presented these indicators to a number of arbitrators who are specialists in teaching methods, measurement, and evaluation, and they obtained an agreement rate of 100%.

Preparing a guide to analyze the content of the freestyle and breaststroke events according to the indicators for organizing educational content:

To obtain logical analysis results, the researchers prepared a guide to analyze the educational content of the two swimming events according to the indicators of organizing educational content. This guide includes the purpose of the analysis, the analyzed material, procedural definitions of the standards for organizing educational content, the method of analysis, and the analysis tables for this list. This will help analysts analyze the two swimming events.

Analysis procedures:

The researchers identified specialist experts for the swimming subject for the purpose of analyzing the content of the two swimming events. They approved experts with the rank of professor, and two experts were accredited. The researchers provided a copy of the methodological book for the swimming subject (Swimming Sports, by the author Dr. Faisal Rashid Al-Ayyash) along with a guidebook for the educational content of the swimming subject. Then the two researchers held sessions with the experts separately. The content of the two swimming events was analyzed. After completing the sessions, the two researchers recorded the results in special tables for analysis.

Scientific analyzes for the list of indicators for organizing educational content

The analysis is not a sufficient indicator of the validity and accuracy of the results unless the necessary scientific conditions are met. Therefore, the researcher relied on the following:

Validity of the list:

- a. Validity of the arbitrators: The instrument was verified by presenting it in its initial form with the instructional manual and analysis tables to a number of arbitrators who are specialists in teaching methods, measurement, and evaluation. This is to demonstrate the validity of the list in analyzing the content of the swimming subject book. The two researchers obtained an agreement rate of 100%.
- b. Content validity: Content validity was achieved through formulating procedural definitions for the criteria for organizing content, as well as defining the analysis process and the goal of analyzing the content of the two swimming events. This step gives the expert a procedural description of the concept and characteristics of content organization standards and the analysis process. This procedure is an indicator of the tool's content validity.

Stability of the list:

The researchers adopted two methods to find stability for the analysis process:

- a. Analysts' Stability: The researchers relied on the agreement of the two experts regarding the results of the analysis process carried out by each expert separately. As the researchers transcribed the results of each expert's analysis separately, they used the Holisti equation (1969) to extract the stability of the analysts' analysis.
- b. Stability over time: The researchers analyzed the methodological textbook for the swimming subject according to the indicators of organizing educational content through several sessions that began on (3/5/2022) and ended on (3/10/2022). Then, the process of analyzing the

educational content of the two swimming events was repeated after a time interval of (15) days. The second analysis session began on (4/25/2022) and ended on (4/29/2022).

The researchers then transcribed the results of the first and second analyses for each content organization standard. Then, the Holisti equation was used to extract the stability between the first and second analyses. [Table 1](#) shows the values of stability coefficients according to the Holisti equation.

Table 1. Stability coefficients for the list of indicators for organizing the educational content of swimming events according to the stability of experts and stability over time according to the Holisti equation.

Stability of the analysis	Freestyle event content	Breaststroke event content	Content of the two events
Between the two researchers and the first expert	0.93	0.95	0.94
Between the two researchers and the second expert	0.95	0.94	0.93
Between the first expert and the second expert	0.93	0.95	0.94
Consistency over time between the first analysis and the second analysis	0.98	0.99	0.98

Experimental design:

The researchers used a control group design with a post-test, which includes two groups, one experimental group and the other a control group. The post-test compares the two groups.

Selection and organization of the proposed educational content:

The researchers relied on sources that dealt with standards for organizing educational content. They are ([Al-Hashemi, A. R., Attia, 2014](#); [Khalil, M., Prinsloo, P., & Slade, 2023](#); [Qarni, 2016](#)). These standards have been employed to ensure the implementation of the nine standards for organizing educational content, and these standards are as follows:

1. The chosen educational content should be valid by adopting scientific sources that convey the same concepts.
2. Using teaching methods and techniques with good validity and meaningful results.
3. The educational content should support teaching and learning activities related to swimming events.
4. The educational content of the swimming events should align with the updates of these events.

5. The educational content of the swimming events should be consistent with the set objectives.
6. The educational content of the swimming activities should be sensitive to the individual differences of the target sample.
7. The educational content of swimming events should meet the desires and needs of learners.
8. The educational content is available through modern methods, means, and technologies.
9. The educational content should contain appropriate means of evaluation in terms of the content's nature and the learners' abilities.
10. The educational content of swimming events must consider the nine standards for organizing educational content.

On the basis of these standards, the educational content for the freestyle and breaststroke events was selected to include the following:

1. Various and modern sources.
2. Educational videos.
3. Educational slide shows.
4. Illustrative drawings and charts.
5. Effective teaching and learning activities.
6. Organizing the selected educational content electronically.

Note that the educational content and standards for selecting and organizing it were presented to experts specialized in swimming education.

Applying the educational content of the two swimming events:

The educational content selected and organized according to the standards used was applied to the female students of the experimental group. The educational content followed by the CPES was applied to the female students of the control group. The application started from (1/3/2022) to (26/4/2022) at the rate of one educational unit per week. The subject's teacher (Prof. Safaa Dhannoun Al-Imam) implemented the educational content.

Application of the post-test:

The technical performance of the students of the experimental and control groups was tested through a model followed by the teacher of the subject with scientific foundations. At the same time, the achievement was measured with a 25-meter test by calculating the time taken.

Statistical methods:

- a. Percentage.
- b. Holisti equation.
- c. Arithmetic mean (AM).
- d. Standard deviation (SD).
- e. T-test for two independent samples.

Results

The results of the first hypothesis (not including indicators for the organization of educational content in the educational content of swimming events.), can be seen in [table 2](#) below:

Table 2. Indicators of the comprehensiveness standard, frequencies, and percentages

N o.	Indicators (comprehensive)	Frequencies	Percentage %
1	The educational content of swimming events includes all the facts and principles related to this sport	4	40
2	The educational content of breaststroke includes all the concepts associated with this sport	3	30
3	Include educational content for swimming events for more comprehensive ideas	0	0
4	Enhancing the educational content of swimming events with teaching and learning activities	3	30
5	Using teaching methods that take into account the principle of comprehensiveness	0	0
6	Using various educational methods that embody the principle of comprehensiveness in presenting information and ideas	0	0
	Total	10	100

Table 3. Continuity standard indicators and their frequencies and percentages

N o.	Indicators (Continuity)	Frequencies	Percentage %
1	Organizing the educational content of swimming events so that new concepts are linked to previous concepts and subsequent concepts	5	41.6
2	Using teaching methods that take into account continuity by linking new concepts for swimming events with previous ones and new ones with subsequent ones	2	16.7
3	Using educational methods that present concepts for swimming events on a continuous and interconnected basis	0	0

4	Presenting concepts for swimming events in one lesson on a continuous and interconnected manner	2	16.7
5	Providing teaching and learning activities in a way that enhances the continuity and interconnectedness of concepts for swimming events	1	8.3
6	Providing examples that take into account the interconnectedness and continuity of the educational content of swimming events	2	16.7
Total		12	100

Table 4. Integration standard indicators and their frequencies and percentages

No.	Indicators (Integration)	Frequencies	Percentage %
1	The topics of the educational content of swimming events should be formulated as if they were integrated units that complement each other	6	60
2	Using methods that present topics for swimming events as units that complement each other without any interruption or departure from the context of the topics	3	30
3	Provide examples that enhance the integration of topic units for swimming events	1	10
4	Providing teaching and learning activities to ensure the strengthening of the integration of subject units for swimming events	0	0
5	Using educational means that display content and topics for swimming events to enhance the integration of educational content units	0	0
Total		10	100

Table 5. Balance standard indicators and their frequencies and percentages

No.	Indicators (Balance)	Frequencies	Percentage %
1	The educational content units for swimming events should be formulated in a way that achieves balance in the educational content concepts	3	37.5

2	Using teaching methods that take into account balance in presenting concepts for swimming events	2	25
3	Using examples to ensure a balance between topic units for swimming events	2	25
4	Formulating teaching and learning activities to ensure balance in concepts and topic units for swimming events	1	12.5
5	Using means and techniques to enhance the principle of balance in presenting topic units for swimming events	0	0
Total		8	100

Table 6. Indicators of the gradation standard and their frequencies and percentages

N o.	Indicators (gradation)	Frequen cies	Percentage %
1	The educational content units for swimming events should be formulated to ensure a gradual progression in presenting ideas and concepts from easy to difficult and from simple to complex.	3	42.6
2	Using teaching methods that take into account the gradation of presenting topics and concepts for swimming events, taking into account the individual differences of learners	2	28.6
3	Use examples that take into account the gradation in ease and difficulty and are compatible with the individual differences of learners	1	14.3
4	Formulating teaching and learning activities according to the principle of gradation from easy to difficult, simple to complex, and in a way that is compatible with the individual differences of the learner	1	14.3
5	Organizing the educational content of educational means adopting the principle of gradation from easy to difficult in a way that achieves reading comprehension by the learners	0	0
Total		7	100

Table 7. Sequential standard indicators and their frequencies and percentages

N o.	Indicators (Sequential)	Frequen cies	Percentage %
1	The educational content units for swimming events must be characterized by a sequential and logical presentation of concepts	4	44.4
2	Use teaching methods that promote the logical sequential of concepts for swimming events	3	33.3
3	Test examples that take into account the logical sequential that characterizes concepts and themes of swimming events	1	11.1
4	Use teaching and learning activities that are consistent with the sequence of ideas and themes for swimming events	1	11.1
5	There should be consistency in the sequence of concepts for swimming events between what is present in their educational content	0	0
Total		9	100

Table 8. Accumulation standard indicators, frequencies, and percentages

N o.	Indicators (Accumulation)	Frequen cies	Percentage %
1	There should be an accumulation of concepts in the educational content units of swimming events	2	50
2	Use teaching methods that address all concepts and information for each unit of the educational content of swimming events	2	50
3	The examples presented should include the largest number of concepts, which reinforces the principle of concept accumulation	0	0
4	Formulating teaching and learning activities to enhance the conceptual accumulation of swimming activities	0	0
5	The content of the educational methods used should reflect the accumulation of knowledge about the concepts of swimming events	0	0
Total		4	100%

Table 9. Concentration standard indicators and their frequencies and percentages

No .	Indicators (Concentration)	Frequencies	Percentage %
1	Each unit of the educational content of swimming events should be centered around a main concept or topic	5	29.4%
2	The educational and behavioral objectives of swimming events should be centered around a main objective	4	23.5%
3	Using teaching methods and techniques that help focus the concepts of the educational material around a main concept	4	23.5%
4	Formulating educational and learning activities for swimming events to enhance the main concepts of these events	3	17.6%
5	The educational content of educational media should be centered around key concepts	0	0%
6	Use examples that reinforce key concepts and the concepts around which they are centered	1	5.9%
	Total	17	100%

Table 10. Indicators of flexibility and growth standards and their frequencies and percentages

No .	Indicators (flexibility and growth)	Frequencies	Percentage %
1	The educational content of swimming events should be characterized by flexibility and growth to ensure the addition, modification, and diversification of concepts	1	33.3
2	Using modern learning methods that are compatible with cognitive development related to swimming events	2	66.7
3	Formulating teaching and learning activities to allow achieving the principle of flexibility in the concepts of the educational content of swimming events	0	0
4	Providing examples that help add the necessary flexibility to the concepts of swimming events	0	0
5	The role of the educational methods used should be to enhance the educational content, allowing the principles of	0	0

flexibility and growth to be achieved in
the concepts of swimming events

Total	3	100
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It is clear from the analysis tables that the total number of frequencies observed was (80) frequencies, distributed as follows. The comprehensiveness standard had 10 frequencies, with a frequency ranging from 0 to 4 and a percentage that ranged from 0% to 40%. The continuity standard had 12 frequencies ranging from 0 to 5 frequency, with a percentage that ranged from 0% to 41.6%. The integration standard had 10 frequencies, ranging from 0 to 6 frequencies, with a percentage that ranged from 0% to 60%. The balance standard had (8) frequencies, ranging from 0 to 3 frequencies, with a percentage that ranged from (0-37.5%). The gradation standard had (7) frequencies, ranging from (0-3) frequency, with a percentage that ranged from (0-42.6) %. As for the sequence, the standard had (9) frequencies, ranging from (1-4) frequency, with a percentage that ranged from (0-44.4%). As for the accumulation standard, it had (4) frequencies, ranging from (0-2) frequency, with a percentage that ranged from (0-50%). The concentration standard had (17) frequencies ranging from (0-5) frequency, with a percentage that ranged from (0-29.4%). As for the standard of flexibility and growth, it had (3) frequencies, ranging from (1-2) frequency, with a percentage that ranged from (0-66.7%).

Table 11. AM, SD, t-test, and significance values of the freestyle and breaststroke events for female students in the experimental and control groups.

Variables	Units	Experiment al group		Control group		(T) valu es	(sig) valu es
		AM	SD	AM	SD		
Freestyle achievement	Second	20.38 3	1.12 7	23.02 1	2.06 4	4.34 4*	0.000
Freestyle performance	Degree	7.867	0.74 3	7.80	1.20 7	8.37 8*	0.000
Breaststroke achievement	Second	24.56 1	0.91	27.22 7	1.47 8	5.94 6*	0.000
Breaststroke performance	Degree	8.267	0.70 4	5.773	1.02 8	7.75 2*	0.000

*Degrees of freedom (28). Significant when error rate \leq (0.05)

Discussion

From tables 2 to 10, it is clear to us from the previous presentation for the cognitive content analysis of the freestyle and breaststroke events that the cognitive content of the two events is limited to a large degree and is not commensurate with the importance of the two events. In addition, there is a

lack of consistency in the cognitive organization of the two events in terms of the organization standards and the objectives set for the two events. Therefore, organizations based on scientific foundations achieve a deep understanding of cognitive content. Thus raising the level and quality of the educational outcomes of the two swimming events by providing educational experiences in a way in which the previous establishes the latter and the latter builds on the previous (Pebriyandi, P., & Mashud, 2024). To help learners understand the relationships between the parts of the subject through sequence, integration of experiences, and achieving balance. In addition, they can sustain their cognitive momentum through the comprehensiveness of concepts and information, the continuity of their presentation, the gradualness of their presentation, and the diversity and flexibility of presenting all new knowledge (Limbo, Abegail B. Limbo-Rivera, 2024). Then, the level and quality of the outputs increase, and without these outputs, the education process becomes useless. It is consistent with what was indicated by (Al-Hashemi, A. R., Attia, 2014); the process of organizing educational content achieves a deep understanding of the educational material and its outcomes. It also ensures that educational experiences are presented in a way in which the previous establishes the latter and the latter builds on the previous. To help learners understand the relationships between the parts of the subject through sequence, integration of experiences, and achieving balance (Ramadhan, Effendy, & Putra Pratama, 2023). In addition, they can sustain their cognitive momentum through the comprehensiveness of concepts and information, the continuity of their presentation, the gradualness of their presentation, and the diversity and flexibility of presenting all new knowledge. Then, the level and quality of the outputs increase, and without these outputs, the education process becomes useless (Al-Hashemi, A. R., Attia, 2014).

The results of the second hypothesis: (There are statistically significant differences between the female students of the experimental group who receive the proposed educational content and the female students of the control group who receive the followed educational content in technical performance and achievement).

We can see from table 11 AM, SD, and (t) values calculated for the students of the experimental and control groups for achievement and technical performance. It appears to us that the female students of the experimental group excelled in the achievement and technical performance of freestyle and breaststroke swimming. In other words, we reject the null hypothesis and accept the alternative hypothesis in favor of the female students of the experimental group. The researchers attribute this result to the fact that the proposed educational content was selected according to logical and scientific selection criteria. Then, it is organized according to international organizational standards. This made the content more consistent, comprehensive, interconnected, and integrated, which reflected positively on teaching and learning activities. This enhanced the practical and technical performance of the swimming events. Therefore, the

achievement of the two swimming events compared to the control group students who were exposed to the educational content followed in the CPESS, which seemed less organized and not subject to international selection and organization standards. This is consistent with what was indicated by (Perisic, A., Perisic, I., Lazic, M., & Perisic, 2023; Sari, W. A., Warni, H. ., & Arifin, 2024) that the cognitive content must be comprehensive and cover all elements of the curriculum, including teaching and learning objectives and activities, and be a main source of learning. It enhances the practical application of what learners learn intending to raise their performance skills and mental and cognitive abilities. It must have an open end that allows the curriculum to be continuously enriched, modified, and updated (Perisic, A., Perisic, I., Lazic, M., & Perisic, 2023).

Conclusions

Finally, through the results obtained, the researchers found that the indicators of organizing the educational content were not included in the educational content of the swimming activities (freestyle and breaststroke) in an organized manner. They noted that the experimental group students exposed to the proposed content outperformed the control group students exposed to the following content: technical performance and achievement in freestyle swimming. They concluded that it is important to organize the educational content according to international organizational standards, which makes it more consistent, comprehensive, coherent, and integrated, and enhances the practical and technical performance of swimming activities. Recommendation: 1). Adopting a list of indicators for organizing the educational content of swimming events as a tool for analyzing and evaluating books on swimming events, 2). Conduct a similar study on other academic subjects and analyze other methodological books.

References

- Al-Ajeely, S. A., Alkhawaldeh, M. A., & Khasawneh, M. A. S. (2023). Developing Curricula Standards in General Education in the Light of International Standards. *Migration Letters*, 20(S3), 1090-1104.
- Al-Hashemi, A. R., Attia, M. A. (2014). *Content Analysis of School Curricula*. (2nd Edition, ed.). Dar Al-Safaa for Publishing and Distribution, Amman, Jordan.
- Arcaro, J. (2024). *Quality in education: An implementation handbook*. Taylor & Francis.
- Dehalwar, K., & Sharma, S. N. (2023). *Fundamentals of Research Writing and Uses of Research Methodologies*. Edupedia Publications Pvt Ltd.
- Duta Putra Utama, D., Doewes, M. ., Fajar Ekawati, F. ., & Németh, Z. (2023). Student Learning Motivation in Physical Education Learning Based on Physical Activity: A High School Analysis Study. *Indonesian Journal of Physical Education and Sport Science*, 3(2), 123-138.
- Khalil, M., Prinsloo, P., & Slade, S. (2023). The use and application of learning theory in learning analytics: A scoping review. *Journal of*

- Computing in Higher Education*, 35(3), 573-594.
- Limbo, Abegail B. Limbo-Rivera, C. B. (2024). Performance Level of Physical Education Students: Basis for the Development of Task-Based Teaching Strategies. *Indonesian Journal of Physical Education and Sport Science*, 4(4), 387-397.
- Matos, J. F., Piedade, J., Freitas, A., Pedro, N., Dorotea, N., Pedro, A., & Galego, C. (2023). Teaching and learning research methodologies in education: A systematic literature review. *Education Sciences*, 13(2), 173.
- Pebriyandi, P., & Mashud, M. (2024). Integration of Practice Style Teaching with Inclusion: Improving Chest Style Swimming Learning Outcomes. *Indonesian Journal of Physical Education and Sport Science*, 4(3), 220-230.
- Perisic, A., Perisic, I., Lazic, M., & Perisic, B. (2023). The foundation for future education, teaching, training, learning, and performing infrastructure-The open interoperability conceptual framework approach. *Heliyon*, 9(6).
- Qarni, Z. M. (2016). *Curriculum Planning and Development*. (1st editio). Modern Library for Publishing and Distribution, Mansoura, Egypt.
- Ramadhan, R., Effendy, F., & Putra Pratama, A. (2023). Sports Education on Student Learning Motivation Seen from the Roles Involved in Sport Education Using Handball. *Indonesian Journal of Physical Education and Sport Science*, 4(2), 22-30. <https://doi.org/10.52188/ijpess.v4i1.511>
- Sari, W. A., Warni, H. ., & Arifin, S. (2024). The Role of Physical Education Sports and Health in Building Character. *Indonesian Journal of Physical Education and Sport Science (IJPESS)*, 4(2), 204-211.
- Siddiqui, S. A., Ra'ed Abdelkarim, S. J., & Dwivedi, S. (2023). Statistical Study of Content Analysis of the Textbooks in Accordance to International Mathematics and Science Study (TIMSS) 2019 Requirements. *Journal of Research Administration*, 5(2).
- Stevani, M., & Tarigan, K. E. (2023). Evaluating English textbooks by using Bloom's taxonomy to analyze reading comprehension question. *SALEE: Study of Applied Linguistics and English Education*, 4(1), 1-18.
- Thangaraju, P., & Medhi, B. (2023). Microteaching: Overview and examination evaluation. *Indian Journal of Pharmacology*, 55(4), 257-262.
- VanTassel-Baska, J., & Wood, S. M. (2023). The integrated curriculum model. In *Systems and models for developing programs for the gifted and talented*. *Routledge*, 655-691.

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